2 Sheets—Sheet 1.

N. B. PHELPS.

Clothes-Wringer.

No. 197,893. Patented Dec. 4, 1877.

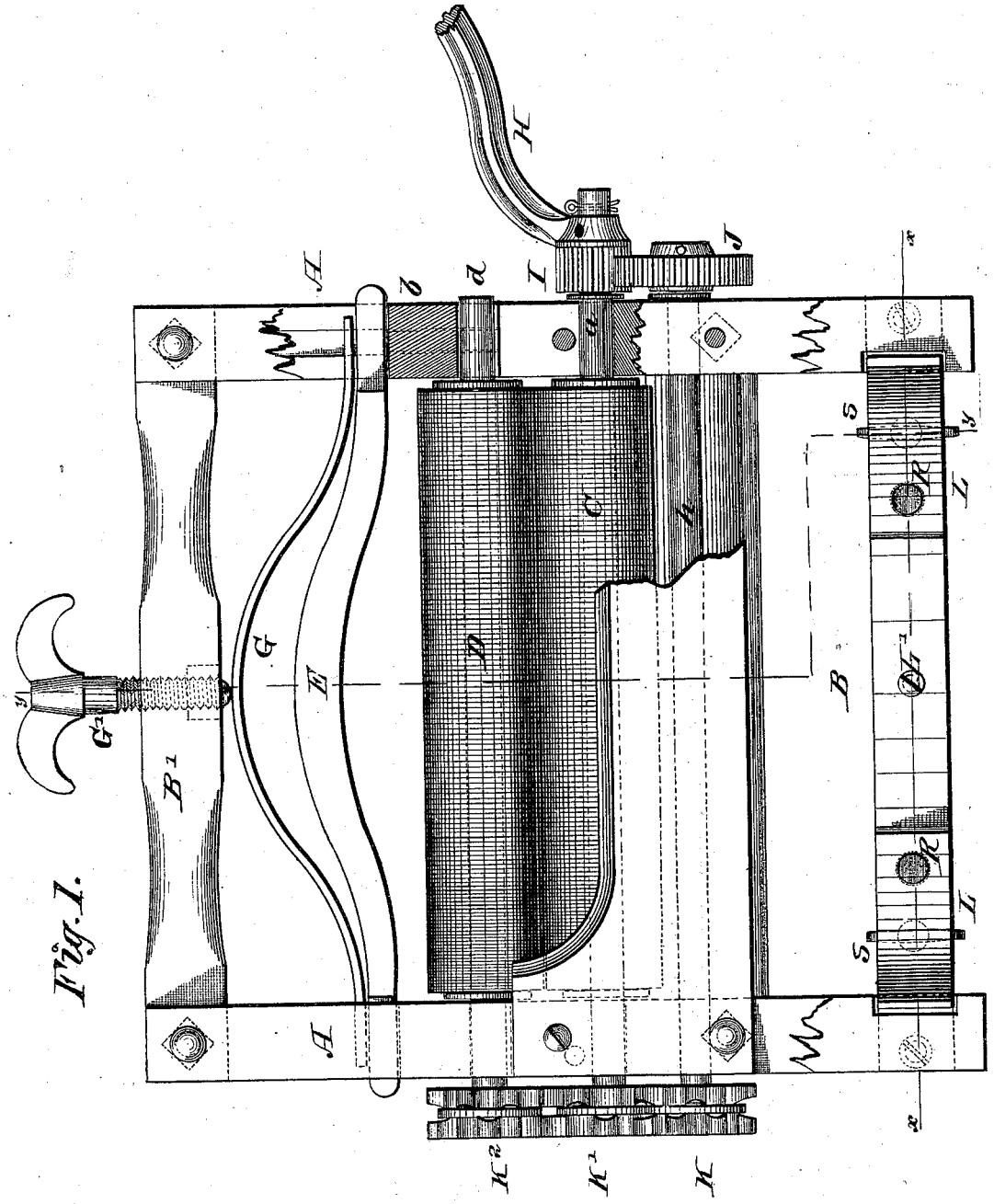

Fig. 1.

Witnesses:

P. C. Dieterich.

Franks & Druffy.

Inventor:

Napoleon B. Phelps.

Per C. H. Watson & Co. Attorneys.

2 Sheets—Sheet 2.

N. B. PHELPS.

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Fig. 3.

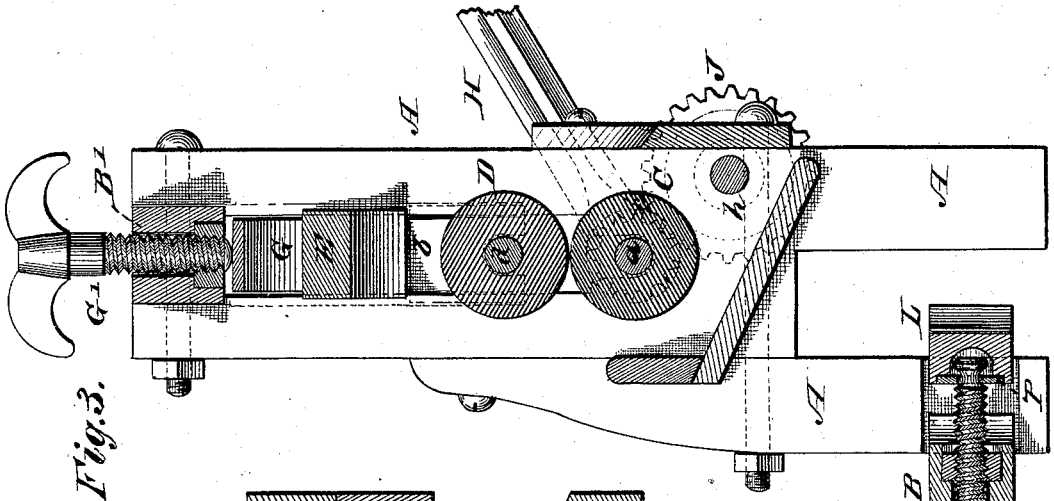


Fig. 2.

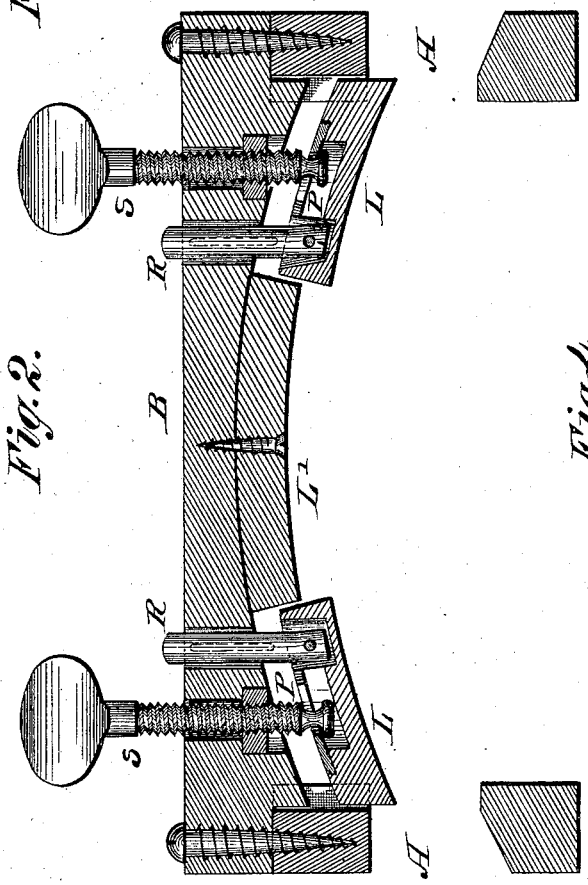
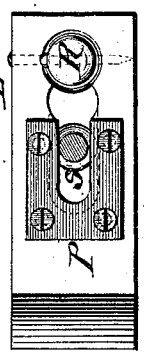


Fig. 4.



Witnesses:

P. C. Dieterich

Frank P. Duffy.

Inventor:

Napoleon B. Phelps.

Per C. H. Watson & Co. Attorneys.

UNITED STATES PATENT OFFICE.

NAPOLEON B. PHELPS, OF NEW YORK, N. Y.

IMPROVEMENT IN CLOTHES-WRINGERS.

Specification forming part of Letters Patent No. **197,893**, dated December 4, 1877; application filed September 13, 1877.

To all whom it may concern:

Be it known that I, NAPOLEON B. PHELPS, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Clothes-Wringers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to clothes-wringing machines; and the nature of my invention consists in the arrangement of the gearing and the clamping device, with a view of making the wringer easy to operate, strong and durable, and to attach it to a tub or vessel without injuring the same, as will be hereinafter more fully set forth.

In the annexed drawings, to which reference is made, and which fully illustrate my invention, Figure 1 is a front elevation of a clothes-wringer, partly in section, embodying my invention. Fig. 2 is a horizontal section of the same through the line *x x*, Fig. 1. Fig. 3 is a cross-section through the line *y y*, Fig. 1. Fig. 4 is a rear view of one of the clamping-blocks.

A A represent the slotted side or end pieces of the wringer-frame, connected at the bottom by a curved cross-bar, B, and by another bar, B′, at the top. C is the lower roller, having the ends of its shaft *a* resting in the end pieces A A. D is the upper roller, resting upon the lower roller, and having boxes *b b* placed in the end pieces A A upon the ends of its shaft *d*.

On top of the boxes *b b* is placed a cross-bar, E, pressed down by means of a curved spring, G, and the tension of this spring regulated by means of a set-screw, G′, passing through the top connecting-bar B′, for the purpose of regulating the pressure of the upper roller D.

Upon one end of the lower roller-shaft *a* is placed a crank, H, with purchase-gear I, which meshes with a gear, J, upon a counter-shaft, *h*, passing through the frame, and having upon its other end a gear-wheel, K. This latter wheel meshes with a similar wheel, K^1, on that end of the lower roller-shaft *a*, and this wheel K^1 gears with a similar wheel, K^2, on the end of the upper roller-shaft *d*. The gears K K^1 K^2 may be made in the double form shown, or of any other suitable construction that will answer the same purpose.

When the crank or purchase driving-gear revolves on the shaft or the lower roller, and connects directly with the gear on the shaft of the upper roller, the rollers, of course, cannot separate without disconnecting the gears; but, in connecting the crank or driving-pinion with a gear, J, attached to a counter-shaft, the separation of the rollers, which is necessary in wringing clothing, has no effect whatever on the driving and its connecting gear; and, by applying the power to the rollers on the end of the wringer opposite that to which the driving or purchase gear is attached, I am enabled to place the crank-gear and its connecting-gear close up to the frame, which is a decided advantage.

When gears for connecting the rollers are placed on the same end of the wringer as the purchase or driving gear, and between the latter and the frame, the purchase-gear is necessarily an inch or more away from the frame, which arrangement has proven defective, inasmuch as the great power of the purchase-gear springs the shaft and causes the purchase-gear and its connecting-gear on the counter-shaft to slip gear; but my arrangement, in placing the driving-gearing close up to the wringer-frame, entirely obviates this difficulty.

The clamping device for the clothes-wringer is constructed in the following manner: In the center, on the concave side of the lower connecting-bar B, is attached a curved block or pad, L′, which may, however, be made in one piece with said bar B. At each end of this block L′ is a movable block or pad, L, of corresponding curvature, forming, when drawn back on line with the same, one continuous horizontal segment of a circle. Each pad or block L has a longitudinal groove on the back, over which is placed a slotted plate, P. In this plate is swiveled the end of a set-screw, S, which screws through a nut imbedded in the bar B. This allows the pad to adjust itself to any curvature of tub horizontally, and, to prevent the pad from turning on the screw,

it is provided with a hinged guide-pin, R, which extends rearward through a hole in the bar B.

This arrangement of the clamping-pads admits of their being made principally of wood, which is much cheaper than metal. Moreover, the wood is not as liable to bruise the tub or vessel as metal clamps.

When the curved clamp is extended the whole length of the wringer of course it fits but one size of a tub, and in attaching the wringer to any sized tub other than the exact circle of the clamp the staves of the tub are pressed from their proper position with more or less injury to the tub, while my adjustable pads readily adapt themselves to a vessel having straight sides, or to a tub of any size or curvature, without any injury whatever to the same.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a wringing-machine, of a purchase driving-gear attached to a crank, and mounted and revolving independently upon an extension of the shaft of the lower roller, and driving a gear of larger size attached to a counter-shaft, the latter driving a suitable gear for driving the gearing on the shafts of the rollers on the opposite end of the wringer from that to which the purchase-gear is applied.

2. The clamping-pads L, supported and adjusted by the cross-bar B and the thumb-screws S, substantially in the manner shown and described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

NAPOLEON B. PHELPS.

Witnesses:
M. C. MESSERVÉ,
W. R. MCCULLOUGH.